



Broadband Mapping Overview December 2010

Wisconsin is engaged in a project to map the availability of broadband connections throughout the state and to make plans for enhanced broadband deployment and usage. An interactive mapping tool has been developed and placed online as part of this effort.

Last year, Governor Doyle designated the Public Service Commission of Wisconsin (PSCW) as the sole Wisconsin entity eligible to apply for and receive a federal mapping/planning grant under the National Telecommunications and Information Administration's (NTIA) State Broadband Data and Development Grant Program (SBDD). The PSCW selected the LinkAMERICA Alliance as the SBDD project management team for the State.

In Nov. 2009, NTIA awarded approximately \$1.7 M to the PSCW for the statewide broadband mapping and planning effort, known as LinkWISCONSIN. An additional \$2.82 million grant was awarded in Sept. 2010 to fund project years 3-5. The initiative is charged with developing a long-term, sustainable plan for increasing access to and use of broadband across the State.

Mapping is an important first step in a state's broadband planning efforts. First and foremost, developing detailed service maps is a great way to organize and conduct a comprehensive inventory of service across the entire State with a spotlight on where there are unserved or underserved areas. This core information helps focus policymakers, community leaders, service providers and others on the central issue at hand: where is the existing digital divide and how can we best close it?

In compliance with requirements of the SBDD—and to ensure a realistic, informative view of Wisconsin's broadband inventory and service areas—the LinkAMERICA Alliance began identifying the State's providers of broadband service in Spring 2009. Providers were identified through multiple sources, including:

- 1) PSCW list of carriers
- 2) State association membership lists
- 3) National association lists
- 4) Third-party data sources
- 5) Web searches

Given the dynamic nature of competition in the telecommunications industry (including mergers, acquisitions, and the constant emergence of new providers), maintaining a current list of broadband providers is one of the most important and challenging aspects of the program. To date well over 100 potential broadband access providers have been contacted, and the majority are confirmed to be providing internet access at the minimum speeds for SBDD participation (768 kilobits per second [kbps] download and 200 kbps upload speed). An initial Provider Workshop was held for all broadband providers identified through this process and the team has continued to help new providers join the program.

Consistent with NTIA's rules to ensure providers' proprietary business data is not compromised, non-disclosure agreements (NDAs) have been executed between the LinkAMERICA Alliance and the majority of known broadband providers. NDAs are not mandatory for data submission, all data is protected regardless of the existence of an executed Agreement.

A secure, online data upload tool was developed for providers. Providers of broadband service unable to submit data in the web-based format were provided with an alternate submission path. Alternate data submitted ranged from scanned paper maps to engineering system drawings or customer address lists. All data received is maintained in a secure server.

Of the known providers, over 80% have submitted at least partial data in the first two rounds of the survey process.¹ As required by the NTIA, the initial data reflected the availability of broadband access as of June 2009. Maps updated and released in Dec. 2010 reflect the availability of broadband access as of June 30, 2010.

Following NTIA guidelines, data collected includes:

- 1) Maximum advertised upstream and downstream speeds.
- 2) Typical upstream and downstream speeds.
- 3) Technology transmission type.
- 4) Street segment data for census blocks larger than two square miles.
- 5) Location and capacity of middle mile infrastructure points.
- 6) End-user wireless broadband service.²

Missing or inaccurate data submissions may lead to an incomplete or inaccurate depiction of broadband service coverage. As maps may be used to identify underserved and unserved areas for future grant funding, scarce resources may be misdirected to areas where broadband already exists and not to areas where the need is the greatest. Therefore, data from commercial sources, such as ExchangeInfo, MediaPrints and AmericanRoamer, is used to fill in gaps in provider submissions or in locations where providers declined to participate. Similar data will also be used to cross check provider-reported coverage and speed information. Initial data has been aggregated into Geographic Information System (GIS) layered maps according to NTIA requirements, and participating broadband service providers have been asked to verify that their service footprint is accurately depicted. Given the changing nature of the data as provider networks grow, the verification process will be ongoing and is critical to confirming the accuracy of the maps.

The online maps are important:

- To consumers as they seek to understand if broadband is available in their area, what type technologies are utilized, which ISPs offer coverage and how they can be contacted for further information.
- To the regional planning teams as they work to understand the reality of the broadband footprint and adoption rates in their specific regions and develop broadband investment plans.³

¹ It should be noted that some parent companies submit data for multiple subsidiaries; and, for the purposes of this data survey, parent companies (rather than individual subsidiaries) are counted.

² For the purposes of this response, 'end-user' is a residential or business party, institution, or state or local government entity that may use broadband for its own purposes and does not resell such service.

³ Regional planning teams are now being formed as part of the LinkWISCONSIN project.

- To policymakers at the local, state and national levels as they seek to better understand broadband conditions and establish appropriate policies.

Per requirements of the SBDD, the data collected for Wisconsin maps is also provided to NTIA for inclusion in a national broadband map. In compliance with Congressional requirements, the first full version of the national map is scheduled for public release in early 2011. Wisconsin's initial data submission, reflecting data current as of June 30, 2009, was submitted to NTIA on March 31, 2010. Updated data, reflecting broadband availability as of June 30, 2010, was submitted to NTIA on Oct. 8, 2010.

With each consecutive round, providers will be asked to update their coverage and speed information and will be given the opportunity to identify and correct errors—allowing the maps to become increasingly accurate over time. The next updates of Wisconsin's interactive maps will take place in Q2 2011 and Q4 2011. Additional information layers will be added to the maps over time that will measure demand and use of broadband across the State.

More information about LinkWISCONSIN and the State's broadband maps can be found at www.link.wisconsin.gov.